V.A.5.N.d.9. SPOROBOLUS CRYPTANDRUS HERBACEOUS ALLIANCE

Sand Dropseed Herbaceous Alliance

SPOROBOLUS CRYPTANDRUS GREAT BASIN HERBACEOUS VEGETATION

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ELEMENT CONCEPT

GLOBAL SUMMARY: This plant association is described from the Uinta Basin and Colorado Plateau where it occurs on alluvial terraces of major rivers and on sand deposits on mesas and plains. Soils are loamy sands and sandy loams derived from alluvium, aeolian deposits or sandstone residuum. Sites have generally been disturbed by flooding, shifting sands, livestock grazing, or human recreation. The vegetation is dominated by the warm-season perennial graminoid *Sporobolus cryptandrus*. *Pleuraphis jamesii, Hesperostipa comata (= Stipa comata)*,or *Equisetum variegatum* frequently occur in low abundance. Low cover of native forbs such as *Sphaeralcea grossulariifolia* or *Chamaesyce fendleri* may be present. The introduced annual grass *Bromus tectorum* and several other exotic species like *Bromus rigidus, Salsola kali, Helianthus annuus, Sisymbrium altissimum*, or *Tribulus terrestris* may be present to abundant, especially on disturbed riparian stands. Occasional *Brickellia* spp. or other shrubs may occur, but they are not dense enough to form a shrub layer.

ENVIRONMENTAL DESCRIPTION

USFWS Wetland System: Not Applicable

Zion National Park Environment: This association is documented at elevations less than 4500 feet, but may occur in small stands of less than 0.5 hectare on mesa tops and flat benches where deep, sandy loam soils develop. Larger than 0.5-hectare stands occur on sandy alluvial benches adjacent to river floodplains.

Global Environment: This grassland is described from the Uinta Basin and Colorado Plateau where it occurs on alluvial terraces of large rivers and on sand deposits on mesas and plains. Elevation ranges from 1243-1450 m. Sites are flat to gently sloping valley bottoms, plains or plateaus. Soils are loamy sands and sandy loams derived from alluvium, aeolian deposits or sandstone residuum. Stands have generally been disturbed by flooding, shifting sands, livestock grazing, or human recreation.

VEGETATION DESCRIPTION

Zion National Park Vegetation: Stands of *Sporobolus cryptandrus* have low cover of 10-30%. Additional herbaceous cover is minimal and frequently represented by exotic grasses, such as *Bromus tectorum* and *Bromus diandrus*, and various weedy forbs. *Pleuraphis jamesii* may occur with foliar cover of less than 10%.

Global Vegetation: This plant association is found on alluvial terraces of large rivers and on sand deposits on mesas and plains. The sparse to moderately dense (10-30% cover) herbaceous layer is characterized by the dominance of the warm-season perennial graminoid *Sporobolus cryptandrus*. *Pleuraphis jamesii, Hesperostipa comata (= Stipa comata)*,or *Equisetum variegatum* frequently occur in low abundance. Low cover of native forbs such as *Sphaeralcea grossulariifolia* or *Chamaesyce fendleri* may be present. The widespread introduced annual grass *Bromus tectorum* and several other exotic species like *Bromus rigidus, Salsola kali, Helianthus annuus, Sisymbrium altissimum*, or *Tribulus terrestris* may be present to abundant, especially on disturbed riparian stands. An occasional *Brickellia* spp or other shrubs may occur, but they are not dense enough to form a shrub layer. Moss is important in some stands.

Global Dynamics: Disturbance is present and appears to be important in the maintenance of this vegetation. *Sporobolus cryptandrus* occurs throughout the western U.S. as a minor species, occasionally becoming locally dominant in disturbed or sandy sites in the midgrass prairie (Weaver and Albertson 1956). This perennial grass produces prolific seeds that are long-lived in the soil (20 years), and is observed to increase in abundance on disturbed and grazing-depleted ranges (USFS 1937).

MOST ABUNDANT SPECIES

Zion National Park

Stratum	Species
GRAMINOID	*Bromus tectorum, Pleuraphis jamesii, Sporobolus cryptandrus*

Global

Stratum	Species
GRAMINOID	*Bromus tectorum, Sporobolus cryptandrus*

CHARACTERISTIC SPECIES

Zion National Park

Stratum	Species
GRAMINOID	*Sporobolus cryptandrus*

Global

Stratum	Species
GRAMINOID	*Sporobolus cryptandrus*

GLOBAL SIMILAR ASSOCIATIONS:

- Sporobolus cryptandrus Shrub Herbaceous Vegetation (CEGL001514)--similar vegetation except with significant shrub component.
- Aristida purpurea var. longiseta - Sporobolus cryptandrus Herbaceous Vegetation (CEGL001515)--similar vegetation and environmental conditions except codominated by *Aristida purpurea var. longiseta*.
- Sporobolus cryptandrus - Poa secunda Herbaceous Vegetation (CEGL001516)--similar vegetation and environmental conditions except codominated by *Poa secunda*.
- Artemisia tridentata / Sporobolus cryptandrus - Achnatherum hymenoides Shrub Herbaceous Vegetation (CEGL001545)
- Aristida purpurea var. longiseta - Pseudoroegneria spicata - Sporobolus cryptandrus Herbaceous Vegetation (CEGL001589)--similar vegetation and environmental conditions except codominated by *Aristida purpurea var. longiseta - Pseudoroegneria spicata*.
- Ephedra viridis / Achnatherum hymenoides - Sporobolus cryptandrus Shrub Herbaceous Vegetation (CEGL001649)--sandy site grasslands with shrub layer.
- Bouteloua gracilis - Sporobolus cryptandrus Herbaceous Vegetation (CEGL001761)
- Schizachyrium scoparium - Aristida basiramea - Sporobolus cryptandrus - Eragrostis trichodes Herbaceous Vegetation (CEGL005221)--central Great Plains type.

GLOBAL STATUS AND CLASSIFICATION COMMENTS

Global Conservation Status Rank: G?.

Global Comments: The association is broadly defined to include *Sporobolus cryptandrus*-dominated stands from both riparian and sandy upland sites. This plant association is similar to the threatened, regionally endemic *Sporobolus cryptandrus* plant associations from the Columbia Basin and lower Snake River that have declined significantly due to loss of habitat from hydroelectric dam construction and conversion of land to cultivation. Many of the riparian stands in these associations are in poor condition because of past management and invasion of introduced species.

ELEMENT DISTRIBUTION

Zion National Park Range: This association is scattered throughout the park from alluvial canyon bottoms to mesa tops. Larger, more homogeneous stands of *Sporobolus cryptandrus* are located in sandy alluvial terraces along the North Fork of the Virgin River and in Cave Valley.

Global Range: The association is found on terraces of large rivers in the Colorado Plateau and likely occurs elsewhere in the southwestern U.S.

Nations: US
States/Provinces: UT

ELEMENT SOURCES

Zion National Park Inventory Notes: Plots: RH 20, 16, 515. This association is in most cases heavily disturbed by humans and livestock due to its close proximity to the main river systems in the park.
Classification Confidence: 1 **Identifier:** CEGL002691
REFERENCES: USFS 1937, Von Loh et al. 2002